

WHAT IS CLAIMED IS:

1. A wireless communications apparatus comprising:  
reception level acquisition means for acquiring  
respective reception levels of wireless signals transmitted  
from at least one mobile terminals; and

relative distance estimation means for estimating a  
relative distance to the mobile terminal in accordance with  
the reception level.

2. The wireless communications apparatus according  
to claim 1, further comprising:

transmission level acquisition means for acquiring  
respective transmission levels of the mobile terminals; and

difference value calculation means for calculating  
respective difference values between the transmission  
levels and the reception levels,

wherein:

the relative distance estimation means estimate a  
relative distance with respect to the mobile terminal in  
accordance with the difference value, instead of the  
reception level.

3. The wireless communications apparatus according  
to claim 2, wherein:

the reception level acquisition means measure the

respective reception levels of the wireless signals; and

the transmission level acquisition means retrieve respective transmission levels of the mobile terminals contained in the wireless signals.

4. The wireless communications apparatus according to claim 1, further comprising:

transmission level writing means for writing a transmission level of the wireless communications apparatus into a wireless signal to be transmitted to the mobile terminal.

5. The wireless communications apparatus according to claim 4, wherein:

the transmission level writing means write an identification code of the wireless communications apparatus into the wireless signal.

6. The wireless communications apparatus according to claim 3, further comprising:

reception level writing means for writing the reception level into a wireless signal to be transmitted to the mobile terminal.

7. The wireless communications apparatus according

to claim 6, wherein:

the reception level writing means write an identification code of the wireless communications apparatus into the wireless signal.

8. The wireless communications apparatus according to claim 1, further comprising:

reception level sorting means for sorting the reception levels acquired by the reception level acquisition means.

9. The wireless communications apparatus according to claim 2, further comprising:

difference value sorting means for sorting difference values calculated by the difference value calculation means.

10. The wireless communications apparatus according to claim 1, further comprising:

identification code acquisition means for acquiring respective identification codes for a plurality of the mobile terminals, the identification codes being contained in the wireless signals transmitted from the mobile terminals;

closest terminal determination means for determining, as a closest mobile terminal, a mobile

terminal providing a largest reception level among the reception levels acquired by the reception level acquisition means; and

selection means for selecting, in accordance with the acquired identification code of the closest mobile terminal thus determined, only the mobile terminal having the identification code to be connected.

11. The wireless communications apparatus according to claim 2, further comprising:

identification code acquisition means for acquiring respective identification codes for a plurality of the mobile terminals, the identification codes being contained in the wireless signals transmitted from the mobile terminals;

terminal determination means for determining a mobile terminal providing a largest transmission level among the transmission levels acquired by the transmission level acquisition means; and

selection means for selecting, in accordance with the acquired identification code of the mobile terminal thus determined, only the mobile terminal having the identification code to be connected.

12. The wireless communications apparatus according to claim 2, further comprising:

identification code acquisition means for acquiring respective identification codes for a plurality of the mobile terminals, the identification codes being contained in the wireless signals transmitted from the mobile terminals;

closest terminal determination means for determining, as a closest mobile terminal, a mobile terminal providing a smallest difference value among the difference values calculated by the difference value calculation means; and

selection means for selecting, in accordance with the acquired identification code of the closest mobile terminal thus determined, only the mobile terminal having the identification code to be connected.

13. The wireless communications apparatus according to claim 1, further comprising:

identification code acquisition means for acquiring respective identification codes for a plurality of the mobile terminals, the identification codes being contained in the wireless signals transmitted from the mobile terminals;

close terminal determination means for determining, as close mobile terminals, at least one mobile terminals providing a reception level greater than a predetermined threshold value among the reception levels acquired by the reception level acquisition means; and

selection means for selecting, in accordance with the identification codes acquired for the close mobile terminals thus determined, mobile terminals having the identification code to be connected.

14. The wireless communications apparatus according to claim 2, further comprising:

identification code acquisition means for acquiring respective identification codes for a plurality of the mobile terminals, the identification codes being contained in the wireless signals transmitted from the mobile terminals;

terminal determination means for determining at least one mobile terminals providing a transmission level greater than a predetermined threshold value among the transmission levels acquired by the transmission level acquisition means; and

selection means for selecting, in accordance with the identification codes acquired for the mobile terminals thus determined, mobile terminals having the identification code to be connected.

15. The wireless communications apparatus according to claim 2, further comprising:

identification code acquisition means for acquiring respective identification codes for a plurality of the mobile

terminals, the identification codes being contained in the wireless signals transmitted from the mobile terminals;

close terminal determination means for determining, as close mobile terminals, at least one mobile terminals providing a difference value less than a predetermined threshold value among the difference values calculated by the difference value calculation means; and

selection means for selecting, in accordance with the identification codes acquired for the close mobile terminals thus determined, mobile terminals having the identification code to be connected.

16. The wireless communications apparatus according to any one of claims 10 through 15, further comprising:

transmission level reduction means for reducing a transmission level of a wireless signal to be transmitted to a mobile terminal at a relative distance, having been estimated by the relative distance estimation means, shorter than a predetermined distance among the mobile terminals selected by the selection means.

17. The wireless communications apparatus according to any one of claims 10 through 15, further comprising:

transmission level raise means for raising a transmission level of a wireless signal to be transmitted to a mobile terminal at a relative distance, having been estimated by the relative distance estimation means, longer than a predetermined distance among the mobile terminals selected by the selection means.

18. The wireless communications apparatus according to claim 4, further comprising:

writing control means for controlling the transmission level writing means to periodically write a transmission level into a wireless signal.

19. The wireless communications apparatus according to claim 6, further comprising:

writing control means for controlling the reception level writing means to periodically write a reception level into a wireless signal.

20. A wireless communications system, including a plurality of the wireless communications apparatuses according to any one of claims 1 through 15, 18, and 19.